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SURGICAL LECTURES.

Theatre, St. Thomas's Hospital,
Wednesday Evening,
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LECTURE 48.

I shall in this evening's Lecture, gentlemen, shew you the operation of castration, but before doing this, I shall describe to you the diseases of the testicle which render such an operation occasionally necessary.—The first disease of the testicle which I shall describe to you is that in which hydatids, or cysts, are formed within it. This is a disease of not very unfrequent occurrence; it affects the young rather than those who are advanced in years. It begins at the extremity of the epidydimis where it joins the testicle; there is an enlargement of the part which extends through the epidydimis towards the vas deferens. It extends from the epidydimis to the body of the testicle, which is considerably swollen. The disease is entirely unattended with pain, unless it acquires a very considerable magnitude. The spermatic cord is a little varicose, but not hard; the spermatic veins are larger than usual. There is very little inflammatory tendency, as the patient can bear the part to be roughly handled without pain; at the first glance the disease bears very much the character of hydrocele. There is very little difference in the state of the spermatic chord, except that it is somewhat more vascular than usual. The disease is confined to the testicle and epidydimis, and there is no instance of its having extended to the spermatic chord or any other part of the body. It generally attacks young persons between the age of seventeen and thirty; the most advanced age at which I have seen it is thirty-eight; it affects persons therefore at that period of life at which they are most anxious that these parts should be perfectly free from disease. The nature of this disease as it appears on dissection is strikingly illustrated in a beautiful preparation on the table; you will there see bags of various sizes formed in every part of the testicle; the smallest not larger than a pin's head, and the largest about the size of a marble. The cysts consist of cellular tissue, not of glandular structure; the testicle is entirely obliterated, every portion of the seminiferous tubes being absorb-

ed by pressure. A great number of hydatids contain water only; others, water tinged with yellow serum, others opake mucus which, when the cyst is opened, is found adhering to its inner side. The operation of castration is sometimes required for this disease on account of its magnitude; the patient is unable to conceal the disease, is incapable of going into society, and will frequently himself entreat that the operation may be performed. It is not on account of the pain that the patient suffers, or any apprehensions that the surgeon need entertain, but on account of the inconvenience to which a patient is exposed, that the operation is usually performed. The constitution of the patient is entirely unaffected by the complaint; indeed I have generally seen it in patients enjoying the most vigorous health. A man in perfect health in every other respect will come up from the country to have the operation performed, and return immediately after it to his accustomed avocations. I am not aware of any instance in which the disease has returned after the operation, either in the spermatic chord or in the other testicle. The disease is entirely local and unattended with danger.

Scirrhus of the Testicle.

The next disease of the testicle to which I shall direct your attention is scirrhus, similar to that which attacks the breast. True schirrus of the testicle is an extremely rare complaint, and I am afraid many testicles have been removed under the supposition of their being schirrous, which might have been saved. I have seen but very few instances of true schirrus. A truly schirrous affection of the testicle begins in the body of it, with an extremely hard swelling, which may immediately inform the surgeon of the nature of the disease. It feels like a marble body lodged within the scrotum, and it is tuberculated on its surface. It sometimes begins in the centre of the testicle, and gradually extends until the whole testicle is involved in the disease. The epidydimis next becomes the seat of the disease, that portion being first attacked, which communicates with the vas deferens. The spermatic chord becomes enlarged, and tubercles of various sizes form upon it. After the spermatic chord has become enlarged, a hard tumour forms beneath the emulgent artery, which may be felt through the abdominal parietes. In true schirrus the testicle does not become enlarged to any considerable size. After the swelling in the loins, the thigh becomes enlarged and œdematous on the side of the disease; this arises from the obstruction to absorption in consequence of ulceration; the pressure from the veins may also have influence in producing this effect. In the former disease which I noticed, I observed that the general health of the patient was not affected; but this is not the case in schirrus of the testicle. The countenance of the patient undergoes a remarkable change; it is yellow, sunk, with a fixed colour, terminating abruptly in

the cheek. When you walk through the wards, and observe a patient greatly emaciated, with this fixed redness of the cheek, the rest of the face being extremely sallow, you may almost conclude, from these appearances, that he is labouring under some schirrus, or cancerous affection. This disease differs also very much from the last, in being attended with excruciating pain, which becomes more intolerable as the disease advances. It is generally from a year and a half to two years before the disease destroys the patient.—When you cut into a swelling arising from this cause, you will find it composed of a considerable number of lobes; cartilaginous substances, and earthy matter are frequently deposited in the testicle. *(The learned Professor exhibited a preparation illustrating these appearances).* Such is the character of true schirrus; it attacks persons at an advanced period; in general between sixty and seventy years of age, seldom under fifty-five years. There is a preparation in which the tuberculated character of the disease is still more manifest than in the last. The operation for this disease is extremely unsuccessful; it rarely happens that the disease does not return after the removal of the schirrus testicle. This may arise in some measure from the late period at which patients usually apply for relief. If the spermatic chord has not become enlarged, you may, by giving the patient alterative medicines for a length of time, succeed sometimes in preventing the return of the disease after the operation: it is, however, an operation which is in general even less successful than that for schirrous tubercles of the breast. I have never performed the operation after the spermatic chord has become enlarged, because I know that the disease will be sure to return. I was once going round the other hospital, when I pointed out a man who had scirrhus of the testicle, with an enlargement of the spermatic chord, and observed that this patient would probably die from the operation if it were performed, and that if he did not, the disease would certainly return. There were some foolish young men present, however, who thought the man might be saved by the operation, and one more foolish than the rest took a lodging for the man at Blackheath, where he performed the operation, from which, it is scarcely necessary to add, his patient died. If it were not for the compassion which one feels for a patient under such circumstances, we might be induced to say that such a result was a proper punishment of his presumption. Presumption, gentlemen, is the offspring of folly, and it commonly happens that a young man who thinks himself an exceeding clever fellow, is a particularly egregious blockhead. (a laugh). It was observed by one of the greatest philosophers of antiquity, at the close of a life devoted to the acquisition of knowledge, that all he knew was, that he knew nothing; and if we consider, gentlemen, the amount of individual acquirement, as compared

with the knowledge which is either unattainable, or which the human faculties have not yet reached, the observation of the philosopher is strictly true. A man of real ability, instead of pluming himself on the extent of his acquisitions, will, in proportion as he advances in life, lament that there is still so much of which he knows nothing. To return, however, from this digression, what I advise, gentlemen, is, that you should never perform the operation of castration, when you find the spermatic chord affected at the abdominal ring.

Fungoid disease of the Testicle.

This disease is much more common than the last; it begins, like the true schirrus, in the body of the testicle;—but unlike that disease, it almost immediately affects the whole body at its first commencement. In a very short time the epidydimis becomes affected; next the spermatic chord; and the loins have a tumour formed in them in the course of a very few weeks. The disease is at first unattended with pain, but when the spermatic chord and the tumour in the loins become of great magnitude, the patient suffers considerably. In this respect it differs from true schirrus, in which the swelling never attains any great size. The fungoid swelling of the testicle sometimes increases to the weight of eleven pounds; the appearance of the surface is somewhat livid; the spermatic chord is loaded with blood, and in some parts you may feel a fluctuation as if there were a cyst within it; it becomes covered with tubercles of considerable size. The tumour has a soft, pulpy feel, readily yielding to pressure; and on the first examination you might suppose the disease to be hydrocele.—I have known it frequently punctured on the supposition of a fluid being contained in it, when nothing but a little blood has followed the operation. It may be distinguished from hydrocele in the following manner:—In the first place, it is flattened on the sides, and round on the fore part, whereas in hydrocele it is pyriform;—if you squeeze any part of the fungoid tumour, the patient will complain of the pain arising from the compression of the testicle, which he will not do in hydrocele, unless you squeeze the posterior part of it; the fungoid tumour rather yields to the pressure of the finger, than fluctuates from one side to the other, as in hydrocele; and lastly, the great weight of the swelling when you lift up the sides, and the livid appearance of the scrotum, mark the malignant character of this disease.

The disease often occurs in young people at about the age of puberty;—I have seen it in one instance, in a child four years old; I shewed you the other evening the testicle of this child, which was loaded with tubercles. The period of life at which it may be said usually to occur is between the age of 17 and 35. The disease is not confined to the testicle, but affects other parts of the body in a great variety of situations. It differs from schirrus

chiefly in the swelling being of a soft kind; indeed it has been termed soft cancer, for it is in many respects, though not precisely, of the same nature with schirrus. If you take blood from a person under this disease you will find it so attenuated, that it will hardly coagulate; and if you have an opportunity of seeing the adhesive process, you will find the inflammation scarcely supporting blood-vessels; what few vessels are pushed through the part assume the appearance of fungus. If you inject a fungoid testicle you will find it in some parts vascular, while in others blood-vessels are not received. On dissecting it you will find a portion occupied by blood not very firmly coagulated, and a portion by adhesive matter poured out by inflammation, which resembles brain in a putrid state; in a part of the swelling will be found cysts containing a serous fluid.

The schirrus and fungoid tumours are the only malignant diseases to which the testicle is subject. The operation may be performed with a hope of success, if the patient be entirely free from other complaints, but in a great majority of the cases which I have seen, the disease has returned. Here is a preparation taken from a patient in whom the disease did not return: in this case the disease was in the earliest stage in which I have seen it. There are in general tubercles of a fungoid character in other parts of the body, which destroy, notwithstanding all that can be done by alterative medicines, after the operation. We may sometimes prevent the disposition to the formation of this disease by giving alterative medicines, but no medicine with which we are acquainted has any power over it, when it is once formed. Do not, therefore, go over the same treatment which experience has shewn to be ineffectual, but try amidst the great variety of new powers with which the discoveries of modern chemists have furnished medicine, whether some of these new substances may not have a specific effect in this disease. I do not mean to say, that by giving alterative medicines, so as to improve the general health, you may not prevent the disposition to the formation of the disease, but that schirrus and fungoid diseases are specific actions, which when they are once engendered in the constitution, we know of no medicine to counteract. He who says we do, is an empiric, and an impostor.

Having mentioned these two diseases which are in a great degree uncontrollable by our profession, I will now call your attention to a complaint which is often mistaken for them, but which is extremely curable—I mean a complaint which may be called the chronic enlargement of the testicle. You may say the other diseases are chronic: true, they are chronic, but then they are specific diseases. The disease to which I now allude, I shall call the simple chronic enlargement of the testicle. It often happens that a person consults a surgeon under the following circumstances: He comes to you with a consi-

derable enlargement of his testicle, which feels extremely hard, and which you might suppose at once to be schirrus. Upon your inquiring whether he has any other complaint, he will tell you that he has occasionally had symptoms of a syphilitic kind. Whether he has taken mercury? Oh, yes, he will say, a good deal, and probably that this disease begun while he was taking mercury. Whether he has any disease in his urethra? he will perhaps say that he has some stricture, or he may say that he has no obstruction whatever. Having made these enquiries, and received such answers, you may say to the party, "Follow my advice implicitly, sir, and I promise you that this enlargement of the testicle shall be removed, and in the course of a few weeks you will be quite well." He will be delighted at hearing this, or he may be disposed to doubt whether you will be able to succeed. You must, in the first place, strictly enjoin him to keep the recumbent posture; without a strict adherence to this, it will be impossible to effect his cure; it is absolutely essential to his recovery. You must apply leeches, and evaporating lotions to the part, and desire him to take three or even five grains of opium night and morning. If he does this the enlargement of the testicle will subside in the course of five weeks. This disease is of a similar nature with that which attacks the eye, which has been called iritis, and requires the same mode of treatment. It occurs in constitutions which have been injured by intemperance and over-excitement; it would increase until the testicle was entirely destroyed, unless you prevent it by the means I have just pointed out to you. The patient will probably ask whether you mean to salivate him; tell him he must have his mouthwell affected, so as to produce a considerable discharge of saliva, and shew that the mercury has acted on the constitution.

Apply leeches to the part occasionally, and evaporating lotions, as the liquor ammoniæ acetate, and spirits of wine.—Do not on any account attempt to introduce a bougie, even though the irritability of the urethra should be the source of the enlargement. The introduction of a bougie at first would only add to the irritability of the urethra: wait till you have altered the constitution by the means I have pointed out, and the swelling of the testicle is considerably reduced, and then but not till then, you may resort to the use of the bougie with advantage. I will tell you a case which made a strong impression on my mind. An officer in the Peninsula had a chronic swelling of the testicle, for which he consulted surgeons, and he was at length told that there was no hope of a cure except by removal of the testicle. He submitted to the operation, and resumed his professional duties. Eight months after the remaining testicle became enlarged; he was exceedingly alarmed, surrendered his situation, and came to this country for advice. He applied to myself and two other surgeons; we had a consulta-

tion on his case, and our opinion was, that there was no necessity for removing the other testicle. All he was advised to do was, to keep his sofa steadily, to take mercury till his mouth became sore, and to apply stimulating lotions to the part. In five weeks the swelling subsided, and in six weeks this gentleman was perfectly well. This chronic enlargement of the testicle very rarely requires an operation, if treated in the way I have now stated. When I commenced my profession I had no more idea but that the testicle required removal than any other surgeon at that time. I have seen a great number of them removed, and I confess that I have removed many myself: but if I were to do so now, I should be guilty of a great crime, for it is a disease which readily yields to the medical means which I have pointed out. There are several preparations on the table of testicles, taken from persons under this disease, before the efficacy of this treatment was ascertained; one of them, I am sorry to say, by myself. There is a species of chronic enlargement of the testicle, however, which requires the operation, as large abscesses are sometimes produced by it, which occasion great pain, so that the patient himself becomes anxious for the removal of the testicle. Fungous granulations spring from the surface of these abscesses; they are not of the true malignant fungoid kind, but they resemble the granulations which spring through the dura mater, in consequence of injury to the brain. Even in this case, however, the granulations may be cut off from the surface, and the integuments brought together, so as frequently to render the removal of the testicle unnecessary. Mr. TRAVERS has cured a case or two of this kind by the pressure of adhesive plaster. I have seen cases cured by sprinkling powdered sulphate of copper, or nitrate of silver on the part. The irritable testicle is a very formidable disease, and, as far as I know, has not been described in surgical books. This complaint generally resists all the means which may be employed to subdue it; and I have, in three instances, been under the necessity of removing the testicle. The part is so exceedingly tender that the patient cannot bear to walk, as the prepuce of the testicle gives him excruciating pain. The moment you touch the part, the patient shrinks from you, and complains of dreadful pain, which will last for hours after. The pain passes up the spermatic chord, to the loins, entering along the nerves of the thigh. It may be relieved for the moment, by medical means, as by giving the blue pill with hyocyamus, but it generally returns, and will continue for months, and even years. —The patient lies on his sofa from morning to night, and is wholly unable to pursue any occupation. I once asked a medical man who was labouring under this complaint, whether he found it absolutely impossible to exert himself, and he told me he should have been extremely glad to join the regiment to which he was surgeon, but he found it utterly impossi-

ble. In three cases, as I before stated, I have been under the necessity of removing the testicle for this disease. The first case was, that of a gentleman who came from Charleston, in South Carolina, with this disease, to try the effect of a change of climate. The part was so excessively tender that he could not bear the slightest handling, and he even dreaded the slightest motion. He confined himself to his chamber for a considerable length of time; I tried a great variety of means, until I grew tired of him, for I confess, gentlemen, that when a disease does not yield readily, I am apt to take French leave. (a laugh.) He applied to Mr. ABERNETHY, who attended him for a considerable time, and then to Mr. PEARSON, who kept him also for a very great length of time. Being no better for the advice he had received, he came back to me again; I advised him to go to Margate, and try the use of the warm bath. His general health was improved by the sea-bathing, but he chose to come home in one of the Margate coaches, and the consequence was, that by the time he reached Blackheath, he was incapable of travelling any further. He was put to bed at an inn on Blackheath, where he remained a long time before he was able to proceed to London. He at length made up his mind to submit to the operation before returning to Charleston, and I removed the testicle. He soon recovered from the operation, and I have had the pleasure of hearing, that since his return to Charleston he has taken to himself a wife, who has produced him several children. The second case was that of a gentleman who had been a long time the subject of the complaint, and who, after submitting to the operation, got perfectly well. The third case was that of the surgeon to whom I just alluded, and who insisted on the operation being performed. The degree of suffering to which a patient is exposed from an irritable state of the testicle can scarcely be conceived; it is for the most part unmanageable by medical treatment, but will, after a great length of time sometimes wear itself out. Mr. WARDROP, a surgeon of Liverpool, once observed to me, in consulting upon a patient's case, that he had an idea of cutting down on the spermatic chord, and dividing the nerves which went to the testicle. Whether he ever put his idea in practice, I know not; it was at any rate ingenious, and shewed his knowledge of anatomy.

The operation of Castration.

This is one of the most simple operations in surgery. You grasp the testicle in your left hand; begin your incision at the upper part of the abdominal ring, and extend it to the lower extremity of the testicle. You must not leave any part of the scrotum undivided, because if you make the opening by which you draw out the testicle from the upper part of the scrotum, a bag of matter will form at the lower part, which will prevent the healing of the wound. Lay bare the spermatic chord com-

pletely at the abdominal ring; and put a needle and ligature through it and the artery of the vas deferens. Some say this is a work of supererogation; but it is not so, because if you omit it, it often happens that when you divide the chord, it is drawn within the abdominal ring by the action of the cremaster, and you cannot get at it without slitting up the abdomen. This once happened during the operation of castration, at which Mr. CLINE, senior, was present. The surgeon had removed the testicle, and when he came to secure the vessels, the spermatic chord could not be found. Mr. CLINE brought the spermatic artery into view, by slitting up the abdominal ring. Having divided the chord, you draw it towards you, and detach the cellular membrane behind it; in this consists the whole of this very easy operation. The spermatic artery, and the artery of the vas deferens are all that require to be secured in the chord; in the scrotum there are several which require to be secured. I shall in the next lecture proceed to the amputations.

LECTURE 49.

Thursday Evening, April 1.

On the Different Amputations.

Operations are now much less frequently performed than they were in the days of our ancestors, owing to the great improvements which have taken place in surgical science. Many of the diseases which were formerly considered incurable can now be easily cured by modes of treatment corresponding with our increased pathological knowledge. Many accidents, for example, where the parts are much lacerated, and for which the ancients would have operated, we leave to nature, by whose influence the different reparative processes will be set in action and the injured limb restored to health and utility. When amputation is necessary, nature will occasionally even perform this operation unassisted by art; in mortification of the feet it often happens that the leg will be amputated by nature as effectually as though it had been accomplished by the amputating knife. At Guy's Hospital there is at the present moment a case of this description. You have seen, in the case which I allude to, first, a division of the skin, then the division of the muscles shorter than the skin, and lastly, the division of the bones; the fibula has already separated, and the exfoliation of the tibia is rapidly going on. Nature in this case if left to herself, would, without doubt, accomplish the amputation of the leg, but the safety of the man requires, I think, that the remainder of the bone should be divided by the saw, for if this be not done, the long continued excitement may wear out the powers of the constitution.

Diseased joints used very frequently to lead to the performance of amputation, in the young as well as in old age; but amputation is much less frequently performed at the present day, in

consequence of such disease, than some years back; even diseases of the joints of the upper extremities of children give rise to amputation much less frequently than in the days of our forefathers, but in chronic diseases of the ankle and knee, amputation is still very commonly performed; there is, however, a marked distinction in these chronic enlargements; one variety may be called congenital, which exists from the birth of the child, and the other is from some debilitating cause which produces the complaint after birth; as the constitution therefore was radically weak or vitiated in the former of these affections, you cannot expect that such permanent benefit will result in that case, as in the latter, where the constitution became affected from some accidental circumstance.

With respect to diseases of the ankle and knee joints, amputation for such complaints will occasionally be necessary both of the leg and thigh; indeed chronic affections of the ankle and knee give rise to amputation as frequently as diseases in any parts of the body. For compound fractures we seldom amputate directly: they are seldom so severe as to require immediate amputation, and it is not until gangrene or disease of the bone has taken place, that it is deemed necessary to amputate; compound fractures, however, from the superior manner in which they are now treated, do much better than formerly, and very severe injuries of this description will often terminate most favourably, therefore upon the whole, amputations are much less frequently performed at the present epoch than in the days of our ancestors. Now, gentlemen, before you amputate, it is necessary that you should apply, in such situations where it can be accomplished, the tourniquet, an instrument which consists of a strong band, capable of completely surrounding the thigh, two brass bridges, a long screw, a pad, and two small rollers. The rollers are situated one at each end of the under bridge. The bridges lie in immediate contact with each other, the concave part of the upper bridge completely fitting the convex surface of the under. The pad is placed in the arch of the under bridge, and which pad is to be placed immediately upon the vessel whose circulation is to be stopped; after having thus applied the pad you are to bring the band around the limb, and secure it tightly upon the upper bridge, then turning the screw by which the two bridges are connected, you can produce upon the vessel any degree of pressure that may be required, for the screw separates one bridge from the other, thus raising the upper bridge, pressing upon the lower one, at the same time tightening the band, and forcing the pad upon the vessel you effectually control the circulation of the blood in the limb to which the instrument is applied; this is the tourniquet at present in general use; another has lately been invented having small spikes at one extremity of the bridge, and these perforate the band after it has been tightly applied round the limb, when

upon turning the screw of this instrument, the same effect is produced as by the former.

The tourniquet in operations where it can be used, will be found of very great service. I mean will be of considerable utility to the operator in point of facilitating the operation, and at the same time rendering it more safe. As an auxiliary, however, its convenience will be much more felt in private than in hospital practice, for in the former there is commonly a deficiency of those able assistants, whom we so generally meet with in the latter, yet the tourniquet, when it can be applied, will more effectually control the circulation than pressure by the hand.

I will now shew you where the tourniquet should be applied when we operate on the upper extremity: for example, if you amputate the arm above the elbow it should be fixed as near as possible to the axilla, this will afford you room for dissecting back the integuments, and at the same time will allow of the retraction of the muscles. If you amputate below the elbow, the instrument should be applied about the middle of the arm, and this is the best place for putting it, on account of the pressure acting more immediately upon the vessel in this situation than when applied higher up, for here nothing but integuments and cellular membrane at the inner edge of the biceps muscle covers the artery; therefore if you operate below the elbow let the tourniquet be applied on the middle of the arm; if above the elbow, not lower than one third of the length of the arm downwards.

When you amputate below the knee you should fix the instrument on the middle of the thigh, with the pad on the femoral artery, at the inner side of the sartorious muscle; if you amputate above the knee, you must then fix it one third the length of the limb downwards; the reason of your applying it so high up is, to allow of the retraction of the muscles, as I before stated to you with regard to the arm, but its necessity is much greater here, as I shall hereafter explain to you. Well, then, in amputation of the upper extremity the pad is placed at the inside of the biceps, and in amputation of the lower extremity, if below the knee, near the middle of the thigh, and at the inner edge of the sartorious muscle. The first amputations I shall shew you will be those of the fingers; we now very rarely amputate at either the second or third joint of the finger, because we find that it is better to remove the entire finger, either at the first joint, or even at the metacarpal bone behind the first joint, than to leave a small portion of the finger before it, for the stump is found to be extremely inconvenient, and to interfere most unpleasantly with the motion, of the remaining fingers; do not, therefore, amputate a finger at the second or third joint, unless you are particularly requested to do so by the patient himself; and as this request may be made I will show you the mode of performing the operation.

Amputation of the Finger at the second or third Joint.

Having felt for the joint you make a circular incision a little below it, through the integuments; this is the first step; you then make a cut through these at each side of the joint; you then turn up and back the flaps thus produced, when, upon dividing the ligament with the scalpel at one side of the joint you immediately open it, carry the knife through and divide the ligament on the opposite side; in this way the finger may be removed; the flaps you see are now laid over the bone and form a good stump. The French perform this operation in a different mode, and in a way, I must say, not very anatomical, for you know the construction of the phalanges is such that the upper portion of the lower bone projects over the articulating surface of the upper; this happens both inside and outside the joint, so that if you attempt to cut directly into the joint, you cannot do so in those parts, for the point of your knife will rest upon the processes I have just mentioned to you; their mode is to bend the finger, and then make a cut into the joint behind the process, and this in a finger that is not diseased, may be done; but, generally speaking, in diseased fingers, the joints cannot be bent; it likewise often happens that the joints themselves are diseased, when, of course, flexion would be exceedingly difficult, if not impossible.

Of Amputation of the Finger at the first joint.

Now, gentlemen, in this amputation, the finger is drawn aside; you then make an incision obliquely through the web situated between them and carry your cut just beyond the knuckle; the knife is then carried through the joint from side to side, leaving a flap of integument sufficient to cover the end of the bone; to say the truth, this is not the best mode of amputating the finger, it is better to make your oblique cut through the web longer than I have just described to you, so as to carry it beyond the joint some way up the metacarpal bone; you make a similar incision on the other side of the joint, and having cleared the bone from its muscular and ligamentous attachments, you saw through the metacarpal bone itself.

The two fingers which were next the diseased one, now approximate, and if kept in this situation until adhesion of the integuments has taken place, very little deformity of the hand will be produced; if on the other hand a portion of the finger be left projecting, the inconvenience of the stump will not only be felt in the motion of the fingers, but a disagreeable deformity be obvious to every spectator; in the operation I have just shewn you, neither one nor the other will exist, comparatively speaking, but in a very trifling degree; there cannot be, of course, any annoyance from a stump, and the deformity will be scarcely observable; well then, we seldom amputate the finger at the second or third joint, unless at the particular desire of the

patient; neither do we recommend the operation at the first joint, but rather the one which I have just mentioned to you, viz.: that of sawing through the metacarpal bone a little way above the knuckle.

The next operation that I shall describe to you is the

Amputation of the Metacarpal Bone of the Thumb.

To accomplish this operation you must begin your incision by cutting through the integuments at the inside of the thumb, nearly opposite the first joint; you carry this incision backwards to the union of the metacarpal with the carpal bones; this incision will form a flap, consisting of integuments and the abductor muscles quite sufficient to cover the wound that will be occasioned by the operation; after having completed this flap, the knife is then to be passed backward from between the index finger and thumb as far as the trapezium, to which bone the head of the metacarpal bone is articulated; when you arrive at this position you are to turn the knife so as to make its blade form a right angle with the incision just made, you are then to carry its edge through the joint, by which the ligaments will be divided, and the bone is thus removed: the flap you observe that I first left, and which is formed principally of the abductor pollicis, and the integuments is quite sufficient to cover the wound; the metacarpal bone of the little finger is removed by nearly a similar operation. You begin your incision at the web between it the little and ring finger, carry down to the articulation with the unciforme bone, pass it through the joint, and then let it terminate upon the outside of the metacarpal bone, opposite the part where you commenced your first incision; a flap will be thus formed of muscles and integuments, in the same way as the flap in the thumb operation; straps of adhesive plaster are to be employed for the purpose of keeping the edges of the wound in contact. The vessels required to be secured in the operations for the removal of the fingers, are the two digital arteries.

Of Amputation of the Foot at the Tarsus.

The operation for the removal of the toes is so similar to that of the fingers, that I do not consider it necessary to say much to you on that subject; one observation, however, I will make to you, which is, that a man who had been in the habit of removing fingers at the first joint, and who had never removed a toe or seen one removed, if he were to conduct the operation in the same manner as for the removal of a finger, would feel himself very much puzzled; that is, if he expected to find the first joint of the toes at the same distance from the web as in the fingers. You must, in the toe operation, carry down your incision between the web for at least an inch an a half, before you will be opposite to the joint: the other steps of the operation are the same as for the removal of a finger. A new operation has of late years been proposed for the amputation of the tarsus, by cutting through the joint,

formed by the astragulus, and os scaphoides, and the os calcis, with the os cuboides. Having desired your assistant to draw up the integuments, you make an incision from the bottom of the foot on one side over the dorsum down to the bottom on the other side, leaving the integuments of the sole of the foot undivided; before you make your first incision, you, of course, feel for, and correctly ascertain the precise situation of the joint; after the first incision has been completed, you are to bend the fore part of the foot downwards, by which you stretch the ligaments, covering the joint, and a slight touch of the knife will then enable the instrument readily to pass between the articulating surfaces of the astragulus and os scaphoides; then, by cutting still further downwards, you divide the ligaments connecting the os calcis and os cuboides. You are now to place the blade of your knife horizontally, and cut along the bottom of the foot towards the toes, between the integuments and bones, until you have cut a proper distance for obtaining a sufficient quantity of integuments to form a flap for covering the end of the stump, which is then to be adjusted neatly over the wound, and confined in that situation by straps of adhesive plaster. I have tried this operation and do not like it; the inflammation which generally results from it, is exceedingly severe, and the suppuration very extensive; this may be accounted for from so large a portion of articulating surface being exposed by the operation. I am of opinion that it is much better to saw through the bones than to perform this operation; there will be much less inflammation, much less suppuration, much less risk to the patient, and at the same time a much greater chance that the integuments will unite by the adhesive process. I would therefore advise you, when it is practicable, rather to saw through the os naviculare and os cuboides than to entirely separate these bones at their articulating surfaces, independent of the advantages which I have already mentioned to you, the last operation would afford the patient a better bearing for the body than the former, as more of the foot will be left by it. Upon the whole, then, I am positive that you will find the operation of sawing through the bones more successful than that of removing the foot at the joint.

Flap Amputation of the Leg.

It is usually performed a little above the ankle joint, about two thirds the length of the leg downwards; it is performed with a view of enabling the person to wear an artificial leg, and in those individuals whose circumstances do not require them to obtain their food by manual labour, it may succeed and answer the object in view; but for those persons who, by their industry and muscular exertions have to obtain a livelihood, it does not succeed.

A man a few years since in Guy's Hospital requested me to amputate his leg a little below the knee, whose foot had previously been removed a little

above the ankle. As the stump was quite well, and the man appeared in health, I really did not think him serious; upon finding, however, that he was so, I persuaded him against the measure, and said to him, you had better

——"bear those ills you have
Than fly to others that you know not of."

As he persisted, however, in requesting the operation might be performed, his wishes were at length gratified, and he had the satisfaction of shewing to his friends his improved stump.

When the flap operation is to be performed, it should be done as I before stated to you two thirds of the leg downwards; you push the catlin through the integuments and muscles of the back of the leg at this part, and carry your incision downwards; when you consider the knife has passed sufficiently far, you are to make it cut its way out immediately at the back of the leg, and let the termination of the flap be of a semilunar shape; it will then correspond to the form of the wound, to which it will afterwards be applied, viz. the upper part of the stump: a circular incision is now to be made over the leg, so as to meet the incisions where the catlin first penetrated, and you remove the limb by sawing through the bones. In addition to the objections I have already mentioned there are two others of very considerable importance; it does not heal near so well as the common amputation; from the constant retraction of the muscles of the calf, the flap becomes drawn from the surface of the bone which exposes it, and the stump usually ulcerates most extensively. We have never seen, in our hospitals, that this operation has succeeded so well as the one I shall presently mention to you, and consequently it has been abandoned. There is another objection, that I will mention to you, against its performance; which is, that if hemorrhage should occur when the ligatures come away, it will be almost impossible to get at the vessels so as to secure them; and this arises from their becoming so deeply embedded in the soft parts. Altogether, therefore, it is an operation which it will be prudent in you to avoid performing.

Now, gentlemen, of

Amputation of the Leg below the Knee.

First let me mention a few rules for your guidance when you perform this operation. In amputations below the knee, if its condition will allow of it, the bone should be sawed through four inches below the point of the patella; when you cut through the integuments your incision should be made with a view of saving two inches of these for the purpose of covering the stump; the quantity, however, is to be regulated according to the size of the limb, and in accidents where the parts have not been reduced by previous disease, four inches frequently will not be found too large a portion. Your principal object, gentlemen, should be to save integuments and not muscle; to preserve muscle for the

purpose of covering the stump in these amputations is an exceedingly false and injurious surgical principle; if you save muscles as well as integuments, retraction will take place, and the stump consequently will not heal near so kindly as it would have done provided you had preserved integuments.

Now, Gentlemen, in holding the amputating knife, do not grasp it thus with the entire hand, but take it rather between the finger and thumb, so that the haft may freely play in the hollow of the hand, and at the same time pass between the finger and thumb when the circular incision is made; by adopting this method, you may make your first cut in an easy and free manner, and obviate that stiffness which is sometimes observable in even experienced operators; I now hold the knife in the manner described, and thus divide the integuments; they have two places of adhesion, viz. over the tibia and over the fibula; having separated these and likewise the connecting cellular membranes the skin is now loosened to the extent of two inches, which quantity will be quite sufficient to cover the stump; in amputating I generally use but one knife, so that I shall divide the muscles, interosseal ligament, and periosteum, with the same instrument; I therefore commonly use in amputating the leg or arm the catlin only; take care to divide the muscles extremely well, so as to prevent any of the fibres being torn by the teeth of the saw; for they not only impede the action of the saw, but render the operation painful and clumsy. Much is said about the attention and ability of your assistant while amputating, and that it depends upon him whether the bone be splintered or not at the time it is sawn through, and likewise the hitching of the saw is attributed to his awkwardness: now the fact is, so much does not depend upon the assistant as has been asserted; the assistant should merely allow the limb to rest upon his hand he should neither depress nor elevate, but quietly permit the position of the limb to be regulated by the operator, and carefully keep it in that situation; the hitching of the saw will then be prevented, and the operator himself may avoid splintering the bone by causing the oscillations of the saw to be short at the moment when the bone is nearly cut through. The vessels to be secured in this operation are anterior, and posterior tibial arteries, and sometimes the anterior & posterior interosseal, in tying the posterior tibial artery take care not to include in the ligature the nerve which accompanies it; after having applied your ligatures cut off one end of each, and let the remaining ends hang out together at the bottom of the stump; straps of adhesive plaster are then to be applied over the integuments, some longitudinally and others perpendicularly, for the purpose of making it circular; these longitudinal and perpendicular straps should be secured in their situation by a strap applied over them and around the limb, so as to retain the first straps that

were applied in their proper situation; the cooler the stump is kept after the operation the better, there will be the less danger from hemorrhage, and less chance of producing the suppurative inflammation, the adhesive is what we want, and this you will be most likely to obtain by keeping the stump in as cool a state as possible; no rollers are applied to stumps by surgeons of the present day—no tow—no flannel caps as there were formerly. Now as to the time for removing the dressings; on the 6th day you may take away one strap for the purpose of permitting any pus that may have collected, to escape, and on the eighth day you may remove the whole of the straps, substituting for each, so soon as taken off, a fresh strap of the same kind of plaster; it would be the height of impropriety to leave off at the same time the whole of the plaster at so early a period, as it would probably destroy the whole of the adhesions which had formed; therefore, on the eighth day, when you remove each strap of plaster, put another in its place before you take off a second.

Of amputation of the Thigh.

To amputate above the knee requires but little art or anatomical knowledge; some degree of skill, however, must be practiced in the operation, if the surgeon wishes to have a good stump after it; the whole art of the operation consists in making the incisions through the muscles in such a manner as to prevent the stump from becoming of a conical shape at a subsequent period. It is not always desirable to perform this operation very near the knee joint; in fact, in many instances, it is a great fault to do so, but more especially when the knee is affected with fungoid or scrophulous disease, and I will tell why. Under the tendon of the rectus muscle for an inch and a half at least above the patella, is situated a quantity of bursæ mucosæ, and if this be cut into under any circumstances, when amputating, it is bad enough, because it will generally lead to most extensive suppuration, and will protract most materially the healing of the stump, and if you operate in consequence of a fungoid, or scrophulous disease of the knee, and then were to cut into the bursæ, the chances are, that the disease would again return in that part, and render another operation necessary. In the operation above the knee not to make your circular incision through the integuments to within an inch and a half of the petella.

Well, gentlemen, after having made the incision through the integuments, and dissected them back, as far as may be thought necessary for the purpose of covering the stump, you are then to cut through the superficial set of muscles; in dividing these muscles, is the grand circumstance to be attended to in this operation; and which circumstance is, to divide the muscles immediately surrounding the bone, at least two inches higher up than the spot where you commenced your incision in the superficial set of muscles; this

will prevent the formation of a conical stump. The reason is obvious; the external muscles being cut longer than the deep seated, an allowance is made for their retracting, when therefore, they are drawn up to their fullest extent, they are then of the same length as the deep seated muscles, and the end of the bone, consequently the entire stump will present to you a flat surface. You will probably ask, why do not the deep seated muscles retract too? The answer is, they cannot, from their intimate conection with, and attachment to the bone. The principle in this operation, is to have the muscles the same length as the bone, without the necessity of applying a bandage.

In dressing this stump, it is generally advisable to apply a roller next to the skin, in consequence of the spaces which exist between the muscles at the end of the stump, the ligatures are then to be placed at the most depending part and straps of adhesive plaster put on the same manner as for amputation below the knee.

In this operation it is generally necessary to tie three arteries, the femoral—the arteria profunda, and that branch which usually runs either in or by the sciatic nerve it is sometimes necessary to draw this artery out of the sciatic for the purpose of securing it and the application of a ligature here requires considerable care, for the want of which I have in two instances known a ligature to have been put upon the sciatic nerve itself; in the first case it was not attended by any evil consequences, but in the second violent spasms came on in the part, they were afterwards diffused throughout the body, and ultimately proved destructive to life.

It should be equally your object to heal this stump by the adhesive process, as much as that of the leg, but in applying the strap of adhesive plaster, remember, that if matter should form it will gravitate, and at the lowest part of the stump, where the ligatures are hanging, you should leave a small aperture to permit its escape.

[The learned Lecturer performed each operation upon the dead subject in the different modes described in the course of the lecture.]

DR. JAMES JOHNSON, AND "THE LANCET."

We believed Dr. JAMES JOHNSON to be a feeble gentleman, but we were not prepared for the degree of imbecelity which he has displayed, in a statement addressed by him to the Editor of one of the monthly medical journals. The singular obliquity of his perceptions is equalled only by his extreme irritability; he is truly a psychological curiosity. In vol. II. p. 224 of THE LANCET, we stated on authority, which we believed, and *still believe* to be unquestionable, that the Doctor

once made an attempt to give original reports of the proceedings of the Medico-Chirurgical Society; and we adverted to this fact, not, of course, as matter of reproach, but as affording a favourable contrast between the Doctor's industry and that of his Reviewer. When we stated some time ago, that the Doctor treated the bare suggestion of his having ever attempted to relieve the barrenness of his Review, by useful, original information, as an attack on his *character*, we believe that many of our readers thought there was a little malice in this representation. They have now, however, the Doctor's own word for it; indignant at having industry and talent imputed to him, he rebuts the charge, by calling witnesses to his *character*; he writes to the Secretary of the Society, to get a certificate of his innocence; and armed with these credentials, he makes a speech to the Society, in which, amidst all the agony of vituperation, he denounces our statement as "a villainous, wilful, and direct falsehood !!!" Dr. JOHNSON'S report of his own speech sufficiently explains the fact which we stated last week, that none of the members present made a single observation in support of it. He makes the President, indeed, say that it was natural and proper for Dr. JOHNSON "thus to repel so infamous a defamation;" but we take leave to give the Doctor credit for greater accuracy in the report of his own absurdities, than of those which he puts into the mouth of another individual It is not credible that any man, except Dr. JAMES JOHNSON, should call it a crime to report the proceedings of a scientific body; and the suggestion of an attempt to do so an infamous defamation! The society, as a body, no doubt, look with a keener eye to the profits which they derive from the publication of their volume at the end of the year, than to the advantages which the profession and the public would derive from the intermediate publication of their proceedings: but we doubt whether any individual member of the society would expose himself to public ridicule by such an observation as that which Dr. JAMES JOHNSON has put into the mouth of the President. Dr. JAMES JOHNSON'S notion of *character* coincides very much with that of *Snake* in the *School*

fer Scandal. Snake having for once in his life done a good action, entreats the company not to *ruin* him by divulging it; Dr. JAMES JOHNSON in like manner seems to think he is a ruined man, if he shall once be convicted of having attempted to give his readers any original information in his Quarterly Journal. The following is the motto which he prefixes to his Review, "*Nec aranearum textus ideo melior, quia ex se fila fir-gunt, nec noster vilior, quia ex alienis libamus, ut apes.*" "The spider's web is not better because it is spun from its own bowels, nor is my review worse, because, like a bee, I take from the writings of other men." And yet this is the consistent personage, who charges the conductors of the Lancet with being 'literary depredators!' We will add one or two words on Dr. JOHNSON'S postscript, which is written so much in the spirit of the article, the falsehood and malignity of which we exposed a few weeks ago, that we might almost imagine ourselves to be again engaged in dissecting the same writer. We must once more allude to M. MAGENDIE'S history of the case of hydrophobia, treated by an injection of warm water into the veins. This was published towards the end of December, and within a week after its publication it was translated into THE LANCET, and immediately copied into the Times, and other Journals. In the month of March comes forth Dr. JOHNSON'S Quarterly Journal, in which he states (p. 942) 'that great *bruit* was occasioned by this case at the Hotel Dieu, and re-echoed throughout Europe;' and gives his readers —what? M. MAGENDIE'S authentic and detailed history of his own experiment? No—the Doctor says 'We have not yet read M. MAGENDIE'S observations on this curious case, but *merely* analysed the statement, as published in the ARCHIVES, and then he endeavours to persuade his readers that this statement in the ARCHIVES is more authentic than M. MAGENDIE'S own history of his own experiment in the *Journal de Physiologie.* All the falsehood and misrepresentation on this subject in Dr. JOHNSON'S review we fully exposed in vol. 2, page 325 of THE LANCET; Dr. JOHNSON, in his postcript, endeavours to palliate the disgrace of that exposure by sub-

terfuge and misrepresentation, which we shall proceed very briefly, as in the former instances, not merely to assert, but to demonstrate :—

" The Reviewer," says Dr. JOHNSON, " asserted that the case was published in the November number of the '*Archives*, and consequently was known in England *some weeks* before *The Lancet* published the case in the newspapers.'—*Postscript.*

If the reader will turn to the LANCET, p. 326, where the passage in Dr. JOHNSON'S Review is quoted, he will see that this is a paltry subterfuge. He will there see that the Reviewer in Doctor JOHNSON'S Journal, denies THE LANCET'S pretensions to celerity, because Mons. MAGENDIE'S account of the case which we published in December had been published in Paris in November, and had consequently been in every body's hands for six weeks. Every one knows that unauthentic accounts of the case were published before Mons. MAGENDIE'S Journal appeared—that in the ARCHIVES is one of them ; and we ourselves quoted a passage from the *Journal Universal*, in which the Editor of that Journal says, he thought it but justice to Mons. MAGENDIE to wait till the authentic account of the case appeared in his own Journal. Yet three months after Mons. MAGENDIE'S article had appeared in our Journal, Dr. JOHNSON tells his readers 'he has not read it, and *merely* analyses the statement as published in the *Archives*.'

" The patient was not Mons. MAGENDIE'S at all. That gentleman was called in by the physicians of the Hotel Dieu, to try the injection of warm water into the veins."—*Postscript.*

This is a desperate attempt to shew that the account in the *Archives* must be more authentic, than Mons. MAGENDIE'S history of his own experiment. If the reader will turn to the *Journal de Physiologie* he will find that Mons MAGENDIE actually makes an apology for performing the operation in the absence of the physicians, and without consulting them, in consequence of the urgeeny of the symptoms. Poor DR. JAMES JOHNSON !

The Lancet has had the baseness to substitute the *Journal Universel* for the *Archives Generales*, in order to make the Medico Chirurgical reviewer appear guilty of falsehood."—*Postscript.*

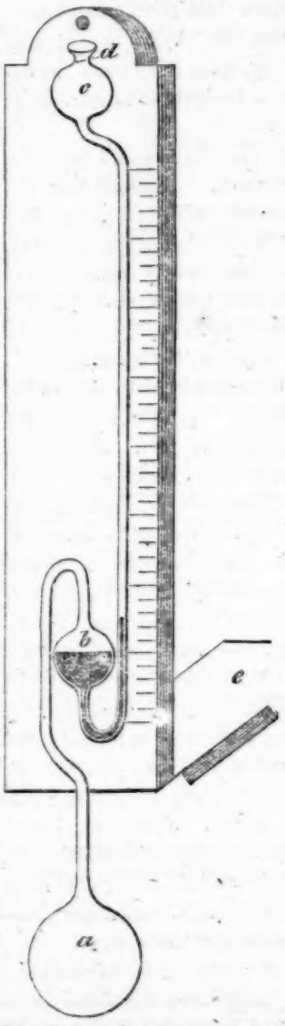
We beg our readers to refer to the following passage in THE LANCET, and we will then ask whether there was any desire on our part, to conceal or misrepresent the source from which the Reviewer took his account of the case, and whether we have not a right to pause before we place implicit faith in any statement or declaration which may be made

by Dr. JAMES JOHNSON: Three months after M. MAGENDIE's paper appeared in THE LANCET, Dr. JOHNSON's Reviewer gives his readers a meagre account of the case—not from MAGENDIE's journal, for that, it seems, he has not read but at the second or third hand from the *Archives Generales*." — *Lancet*, p. 325

So, the readers of Dr. JOHNSON's Review are to believe that a miserable sketch of the case taken at second-hand from the *Archives*, is more authentic than M. MAGENDIE's copious history of his own experiment in his own Journal! We certainly can allow for a considerable degree of irritation on the part of the Editor of the *Quarterly Journal*.—THE LANCET anticipates him in every thing that interests the medical world, and leaves him to regale himself and his readers on orts and fragments.—"chaff and bran, chaff and bran, porridge after meat." Our readers can conceive a Scotsman who has been anticipated at a dinner, peeping into jugs of flat beer, eyeing the too diaphanous vacuity of decanters and the 'dishes which meat did once inhabit.' Such is the state of mind of the Editor of the *Quarterly Journal*; but not content with venting himself in the straight-forward, and justifiable language of disappointment, he must swear, like Lord PETER, that his crust is most excellent mutton."—*Lancet*:

We confess that we are ashamed of contending with an adversary, who can descend to such miserable subterfuges and misrepresentations, as the Editor of the Medico-Chirurgical Review.

CHEMISTRY.



Mr. Gurney's Thermometer for measuring delicate Temperature

We concluded our observations on Heat, by detailing the methods of conducting some experiments for the purpose of shewing that aeriform bodies were very sensibly expanded by increase of temperature. Before we proceed to investigate the manner in which heat acts on liquid or solid bodies we shall introduce to our readers Mr. Gurney's new Thermometer for measuring very minute changes of temperature, because the principle of the instrument is founded on the comparative expansion of gaseous bodies, and because we regard it as a most important instrument for experimental enquiry. We must first make a few remarks on the common air Thermometer. This instrument is constructed on the principle of expansion, which we have endeavoured to show in our previous experiments on heat. It may be made by inverting the stem of the bolt head, which we have previously described, in a cup or small bottle of any coloured liquid, fixing at the same time a graduated scale immediately behind the tube, so as to be able to read off any temperature that may be indicated by the rise or fall of the liquid in the stem of the instrument. This is the form of the first Thermometer which was invented and is still acknowledged to be more delicate than any other at present in use, for measuring small changes of temperature.

There are some circumstances connected with its use as a standard Thermometer which render it objectionable, and it is now almost entirely disused for this purpose. The principle one is, that the fluid which flows up and down the tube is affected by the *weight* of the atmosphere as well as by the temperature, and therefore requires comparative observation with the height of the quicksilver in the barometer and constant calculation to obtain the true temperature at the time of inspection. Another objection arises from the evaporation of the fluid in the vessel into which the stem of the Thermometer is inserted.

These objections, however, do not interfere with its employment for measuring small changes of temperature in the labaratory which are effected by experiment. The objection here arises from the *form* or construction of the instrument itself. For instance, it is impossible to invert the bulb, into any liquid without destroying the action of the instrument altogether, consequently it cannot be used for measuring the temperature of bodies which require the bulb to be introduced into them in any direction, differing from one directly upwards. The use of this sensible instrument is therefore, at present, very limited in its application.

The whole of the preceding objections to the employment of the air thermometer, are completely removed by Mr. GURNEY'S construction as represented above. The delicacy of his instrument is considerably increased by using Hydrogen gas instead of common air, to fill the bulb (a) of the thermometer. Aeriform bodies are found to expand by heat in the

ratio of their respective densities; therefore, as we understood Mr. GURNEY, he had filled the bulb of his thermometer, with hydrogen gas, under the idea that it would be more susceptible of minute changes than common air. It will be observed, by inspecting the above representation, that there are three bulbs connected with the instrument: each of these has its respective duties to perform. The middle bulb (b) is provided for the purpose of retaining sufficient fluid, to reach up the whole tube, to its capillary extremity, where it enters the bulb, (e) forming a continued column, when the gas in the bulb (a) is expanded by heat, and presses on the surface of the liquid in (b). This is certainly a great advantage in reading off the degree of temperature indicated by the rise or fall of the fluid along the graduated scale. The bulb (b) being larger than sufficient for containing the whole of the fluid employed, it serves also as a guard against the passage of any part of it into the bulb, (a) in case of condensation by cold; for he remarked, if a great condensation of the gas in the bulb was produced by placing it in a cold medium, the whole of the fluid would be drawn into this middle bulb, and would there allow any air to bubble through and enter the lower bulb of the thermometer.

The third bulb shown above the capillary opening, is provided as a guard on the other hand to prevent the escape of the fluid out of the instrument, in case a sudden expansion of the gas should drive the whole up the tube along the graduated scale of the instrument; it acts on the same principle as the middle one in preventing its escape into the lower bulb.—Mr. G. exhibited this by slightly warming the bulb of the thermometer: the fluid was immediately driven into the bulb above the tube, but as soon as the instrument was again cool, it returned to the middle bulb, and a small quantity of gas which had escaped from the tube by the expansion, was again returned to it by bubbling through the fluid: and without carrying the least particle of liquid with it. Mr. G. observed he had shewn this experiment with a view also to explain the manner in which the instrument was first charged; which he said was done by first expelling the whole of the air from the glass by giving the bulb tube, great heat, and at this moment pouring a little coloured fluid into the open cup of the instrument(d), and now introducing it into a jar of hydrogen gas, or tying a bladder, containing hydrogen gas, about the opening of the tube, he stated that as the tube cooled, the fluid would be driven into the middle bulb(b), and would there be retained, allowing the lower bulb of the instrument to be filled by the gas, in the manner previously shewn. The point of fluid at the lower neck of the middle bulb, would consequently indicate the degree of cold applied to the lower one, therefore he advised that this should be made 32° by placing the thermometer in a freezing mixture when the instrument was charged for permanent use.

The other points, in the scale, he said, were found by placing it in boiling water, and dividing the scale in the usual way.

Mr. GURNEY remarked, that one objection was likely to arise from the evaporation of the liquid in the tube, (or by oxidation if mercury was used,) because it was indispensably necessary for the action of the instrument that the end of the tube (d) should be open to the atmosphere; he did not see how this objection could be obviated except by making the opening (d) so small that evaporation could not take place through it. This inconvenience however we apprehended would not interfere much with the use of the instrument in practice.

Mr. GURNEY'S objection was immediately removed by Sir ANTHONY CARLISLE, who happened to be present at the lecture; he proposed that a saturated solution of mur. of lime, caustic potash, or sulphuric acid should be employed in the construction of the instrument, and advised the solution to be exposed to the atmosphere for some time previous to its introduction, so that it might receive its maximum of humidity; with these precautions, he stated, there would be no chance of evaporation through the capillary opening.

This was a happy suggestion, and if adopted, in our opinion, will leave Mr. GURNEY'S instrument without a single objection.

We have not time, nor do we think it necessary to make any observations on the value of this instrument; every scientific man must see at once that it possesses many and important advantages over every other instrument of the kind. In our experiments after lecture we noticed that a change of temperature which moved the column of spirit in the common Thermometer about the one tenth of an inch, to raise the fluid in Mr. GURNEY'S nearly fourteen inches, we observed also that if the hand was brought within two inches of the bulb, the spirit rose four or five inches by the radiation of heat from it. These facts prove its extreme delicacy and capability of being used for very delicate experiments. Mr. G. remarked, that the size of the bore and height of the tube must be regulated by the degree of delicacy required in the instrument; and that it might be made to measure the hundredth part of a degree with the greatest accuracy.*

* The instrument may be obtained of Mr. Bancks, in the Strand.

NEW PUBLICATIONS, BY THE HOLY ALLIANCE OF DIVINITY AND PHYSIC.

Shortly will be Published,

DIABOLUS REDIVIVUS; or, a Defence of the Creed of St. ATHANASIUS. By Mr. CHEVALIER.

Lectures on the Thirty-nine Articles. By Mr. LAWRENCE.

A Treatise on Fungus Hæmatodes. By the Rev. Mr. IRVING, of the Caledonian Chapel.

Thoughts on Prurigo. By the same Author.

Mr. CHEVALIER has in the press a Treatise on Sub-lapsarianism: and Mr. IRVING will return the compliment by a few remarks on prolapsus ani.

A Parody on the Soliloquy in Macbeth:—"Is this a *Lancet* which I hold before me?" by the Ghost of Dr. JOHNSON.

The Use of *Gold* in the cure of Syphilis: by Mr. J. PEARSON. We believe no surgeon in this metropolis shews so decided a preference for this preparation.

Tractatus, in quo de vita Jonæ intra stomachum balænæ degentis dissitur, rationesque physicæ, quare propheta in stomachum piscis ingurgitatus minime digeri potuerit, facile exponuntur, auctore GEORGIO PEARSON, M. D.

"Hats off," by Sir VILLIAM WIZARD: at Newberry's, or any library for grown children.

LIZARS' ANATOMICAL PLATES.

Part the Fourth, containing the muscles of the trunk is now before us. The highest praise that we can bestow upon the Engravings in this division is to say, that they are equal in every point of view to those that have already appeared from the same masterly hand.

The extensive patronage these plates have received is the best proof of their excellence and utility.

HOSPITAL REPORTS.

MIDDLESEX HOSPITAL.

March 29th.

The following is the case referred to in our last number:—

WM. NIBLO, ætat. 35, a coachman who had fallen from the box of his vehicle, was brought to the hospital about four o'clock, p. m. When we saw him, which was immediately on his being placed in bed, he lay in a comatose state—breathing laborious and oppressed, but not stertorous. Pupils very much contracted. His pulse was the smallest we ever recollect to have noticed; it was about natural in its frequency, but almost imperceptibly weak. A few hours afterwards, he vomited the contents of his stomach, when he became somewhat sensible. The pulse, however, did not exhibit any manifest change. A catheter was introduced for the purpose of withdrawing the contents of the bladder, which had become considerably distended. Some brandy and water was given him, which produced no beneficial effect. The comatose state again succeeded, and about nine o'clock, a. m. he died.

On examining the body, it was found that nearly all the ribs of the right side had been fractured, some of them in several places. The liver was ruptured, particularly the right lobe, which was a congeries of fragments. The left was not so much injured. The lungs exhibited no change. The right kidney was also ruptured, and about a quart of coagulated blood was found in the cavity of the abdomen. The sternum was fractured across, and two or three ribs on the left side had met with a similar injury. It is a singular fact that the great blood-vessels of the liver re-

mained entire amidst the general devastation of that important viscus.

April 3d.

GEORGE GAINE, ætat. 22, was admitted about four o'clock, p. m. with an inguinal hernia of the right side, which had been strangulated twenty-two hours. The tumour was about the size of a pullet's egg, rather hard and acutely painful. Venesection and the warm bath were employed; after which it was reduced by the taxis—his pulse at this period was about 96, and tolerably full.

℞: Extracti Colocynthidis Compositi gr. xv.

Hydrargyri submuriatis gr. jjj. frant, pilulæ jjj. statim sumendæ, and an enema was administered.

April 4th.

The hernia again came down during the night, and was replaced by the house surgeon. The enema and pills had procured one copious alvine evacuation. In the morning there was great tenderness of the abdomen, especially about the epigastric region. Pulse 100, and rather weak; skin moist, tongue a little furred; languor and anxiety. Twenty leeches were applied to the epigastrium, and afterwards warm fomentations; and the following pills were given him:

℞: Hydrargyri submuriatis gr. jj.

Pulveris antimonialis, gr. jjj. ft. pilula ter die sumenda.

At this period he vomited a quantity of porraceous matter, of a dark green colour. In the afternoon his pulse was 130, and very weak. The epigastric region was the seat of the most excruciating pain, and the patient writhed, and rolled in bed in great agony. An enema was given him, and some calomel and Dover's powder, and a few ounces of blood were drawn from the arm.

Soon afterwards a sudden cessation of pain took place, and a soporose state succeeded late in the evening; hiccough followed, and early in the morning death.

We were not present at the post mortem examination, but have understood that nothing was observed to account satisfactorily for the sudden death of the patient. We afterwards saw a part of the ileum which had been removed; for the space of three inches, it was of a dark livid hue, but hardly amounted to sphacelus.

It is a melancholy fact, that many cases of this description are attended with fatal results, in many instances arising from the delays consequent on the false delicacy of the patients themselves, sometimes, too, of their friends; and often from the injudicious conduct of the practitioners, who, finding their own efforts unsuccessful, after the lapse of several hours, consign their patients to the hospitals, as a sort of dernier resort, when active measures have been delayed, and successful practitioners are often by these means humiliated, by the melancholy terminations, too often resulting from these extraneous causes, and over which they can have no control.

April 7th.—There have been no operations at this hospital since our last report. A few

accidents have been admitted, one of which we shall mention in our next number. The others are of little consequence.

ST. BARTHOLOMEW'S HOSPITAL.

Continuation of the Case of WM. ROBERTS, *from p.* 418, *vol.* 2.

March 25.—Tongue furred, and rather brown.—Pulse 115, and weak.—Bowels confined.—Tenderness at the lower part of the abdomen.—Scrotum sloughing; the parts are covered by a linseed poultice—is ordered

Brandy ℥ vi.
Strong broth.
℞ hydr. submur, gr. i.
Pulv. Jalap. gr. v. statim.

The symptoms above detailed continued to grow more and more severe, and particularly the tenderness of the abdomen, until Wednesday, March 31st, when he expired at ¼ before two o'clock, A. M.

A post mortem examination was instituted by Sir LUDFORD HARVEY and another Gentleman, the particulars attending which have not yet transpired; consequently we are unable to communicate them to our readers, but expect shortly to have the satisfaction of doing so, as we are given to understand that Sir LUDFORD is preparing a clinical lecture founded on the case, which of course for the sake of his own reputation, and in vindication of his new hydraulic principle, he will make public as speedily as possible.

April 8. Two or three important accidents have been admitted into this Hospital within these few days, want of space prevents a particular notice of them in the present number.

Guy's and St. Thomas's in our next.

SKETCHES OF THE SURGICAL PROFESSION IN IRELAND.

No. III.

Dr. STOKES.

To the Editor of The Lancet.

SIR,—A writer whose name we cannot now recollect, informs us that every duty has its concomitant evils, a truism not without meaning when applied to ourselves, as we find that the office of biographer is not wholly exempt from unpleasant consequences. For be his pen steeped in the "milk of human kindness," or saturated with the gall of asperity; let him flatter where merit does not exist, or censure where abuses provoke chastisement; 'tis all the same, he is sure not to please this implacable world. The undiscriminating who see perfection in all things, ask for still more praise, while the malignant whom nothing short of injustice will satisfy, cry out—lay on the lash with a bolder hand. On the other side, the morbid thirst of vanity for applause is not to be slaked—no more than the ambition of mediocrity can bear to be reduced to its proper level. It is one of the inseparable failings too, of men in power, not to forgive any thing which their self-love may construe into an injury. They prize their persons and their pretensions as a Jew does his beard, and are not to be approached but with veneration. In this respect they resemble royalty, amenable to no laws, and above public opinion. The halo of importance with which their pride invests them, is to suffer no obscuration from comparison. As long as their name is inflated with by an official title, the bubble is not to be burst by the rude hand of examination. Yet these men will pay an artist to perform that which they deny our right of executing gratuitously, and will challenge all whom it may concern, by an advertisement in a newspaper, to witness the extent of their

learning and the powers of their genius. Strange inconsistency! but, knowing the necessity of these assumed appearances to veil the nakedness of pretension from the gaze of derision, we are less disposed to quarrel with the almost pardonable craftiness of impotence. Ever since it was our lot to dip our hands in ink, our ears have been stunned by the murmurs of discontent or amused by the silly conjectures of sundry individuals, as to the identity and intention of the author of the "sketches, in *The Lancet*." Poor Sir PETER *ululates* plaintively as an Irish Banshee over the fate of the College; but his sorrows have been latterly somewhat consoled by the sympathetic sighs of Mr. COLLES, who with a vindictiveness, of which we could not suspect him, has made common cause to discover the aggressor; and as for Mr. TODD whom the approach of the first of May was beginning to revive, he has a confirmed relapse of the Lumbago. One will have it, that our remarks have been written to gratify the rage of disappointment. Another with much about the same accuracy, but with more charitable feelings, attributes them to the overflowing of bilious malignity; a third accuses a rejected candidate, of speaking so lightly of the merits of the Surgical Corporation; while a fourth puts the crime to the account of an irritable little gentleman, merely because his inditing of a few medical pamphlets gives a colour to such a suspicion. To those diviners, whose guesses are about as correct, as the responses of the sybilline leaves, we deign not to explain our motives, or to apologise for our conduct. They will both answer for themselves. 'Tis not therefore to allay the fever of the curious that we have touched upon this question, but to set aside in future all conjecture, and to protect the innocent from the penalty that should only fall on the guilty. We assure them that in secreting our name, we will at least in this one respect imitate the immortal JUNIUS, and that their suspicions, like the labours of the DANAIDES will be unavailing in the end. We will only add to what we have said upon this subject, that it is not against persons, but a system we inveigh—a system that has converted the temple of science into a mart of imposition and intrigue,—that has profaned the purity of her altar by the elevation of a "Lama" to the exclusion of the true divinity of Genius.

Even in the desolateness of the desart there are spots of verdure and of shade, where the weary traveller may repose, and cool his lips with the waters of some refreshing spring—where the song of some solitary wanderer like himself will harmonize his feelings to the contrast of past suffering with present enjoyment, and reconcile him to the endurance of toilsome and perilous futurity. On the sterile chart too of criticism, through which we have to steer our course, it is some consolation that there are objects to which we can turn with pleasure, and contemplate with unmixed delight. Such is the subject of the present essay, a man who can never be looked upon without respect, or known without being admired. Already beginning to stoop to the influence of time, like a sear leaf bent upon its stem in autumn, we approach him with a deferential feeling inspired alike by his virtues and his years. A blue roquelaire, hanging carelessly from his shoulders, conceals beneath its classic folds, a form of slender proportions, unincumbered by *sartorial* embellishment. But under this unstudied simplicity of appearance so conformable to the habits of studious old age, we may say with the poet—"*ingenium ingens latet hoc sub corpore.*" And as he now hurries on before us in imagination, from the Lecture room to bury himself once more in the beloved solitude of the library, he seems as if unconscious of all around him, and that his thoughts were fixed upon something ulterior to the earth on which he treads. The patriachal repose of his aspect and the unaffected dignity of his demeanor are enlivened by those finer tints of feeling contracted from a long communion with the spiritualities of Creation.—Ascending from the effect to its cause, he seems to have only commenced his enquiries, where others conclude theirs, and to have by an insatiable curiosity directed by reason and assisted by a powerful mind, penetrated the mysterious ways of providence in the distribution and production of its works. In this arduous voyage, wherein so many have failed from the tenuity of an ideal atmosphere, he has happily reached that point of science attainable only to the few. There is none of the trickery, none of the artifice of

would-be philosophy about him—he is what he would pass for, "An honest man, the noblest work of God," and a living satire upon the majority of the medical profession in Ireland. We need not inform our readers here at least, that the person whom we have been attempting to describe, is their venerable countryman Dr. STOKES.

Of the early history of this distinguished individual, we regret to say our information is limited. It would be a pleasing task to trace him through all the gradations and vicissitudes of life, to walk with him in the morning of existence, when hope first put forth its vernal shoots—to sympathise with his sorrows in disappointment—to contemplate the vigour of his mind in the maturity of manhood—to mark by what exertions he became a proficient in every department of science,—and to learn from his patient, uncompromising independence to persevere against persecution and adversity. But if this pleasure and improvement be denied us in the absence of the first pages of his history we have the moral of his labours to recompence us for the deficiency which we cannot supply. As early as the year 1788, he became a fellow of Trinity College, and continued in the discharge of his duties in a manner no less profitable to his pupils, than honourable to himself, up to the memorable era of 1798. From this period to 1803 there was little tranquility in Ireland. Its inhabitants tortured into madness by persecutors numerous as the patronage of an heartless Government multiplies those pests of society, were compelled at length to vindicate themselves by opposing force to force. If in this natural struggle for self-preservation, there were implicated characters otherwise respectable, it is less to be wondered at than if there had not. Accordingly we find, that in this last effort of suffering humanity, to extricate itself from the deadly grasp of that serpent, in whose coils it had for centuries been patiently entwined, persons in every department of society participated. The senate, the bar, the medical profession, and even the protestant Church itself, poured forth its votaries to the cause of independence who could relinquish the certain enjoyment of bloated benefices, for the dubious success of revolutionary warfare. In short there were persons of all professions either openly connected with, or who secretly sanctioned the enterprize into which their harassed countrymen had embarked. The spark of freedom elicited by the collision of contending parties having next fallen into the University, was soon fanned into a threatning flame by the declamations of many an embryo Brutus.—During this period however, the notorious CLARE happened to be Vice-Chancellor of the College. To purify the hallowed sanctuary of religion from the taint of sedition, and pike-errantry, he expelled many of the students, and condemned Dr. STOKES to three years of probationary degradation, as a penance for a crime of which there was no proof, except that which existed in the suspicion of his lordly inquisitor. Struck with the injustice of the sentence pronounced on their esteemed associate, the Fellows of the College resolved upon presenting a petition praying a mitigation of the punishment. The voice of the whole body was in his favour, except WILLIAM MAGEE, at present the Archbishop of Dublin, and now pretty well known here by the name of Doctor SYNTAX, to which ideal personage it is said he bears a strong resemblance. In this shameful transaction, at all events, the said Syntactical Docter gave proofs of his qualifications to set out on a pilgrimage in search of the *sublimities* of this world. Against the wish of all the Fellows he refused to sign the petition—he triumphed in his mercenary speculation,—obtained the next senior Fellowship, which Doctor STOKES would have been elevated to, had he not been the victim of unmerited persecution. But the same liberality of sentiment which exposed him on former occasions to the abuse of power, doomed him to still severer trials. for we find he became again the butt of intolerance, being compelled, in consequence of some objections to his religious opinions, as there could be none to his virtue, to relinquish altogether a College life, after holding a Fellowship for thirty-four years. Fortunately for him, however, he possessed those resources over which his enemies could have no controul—the accumulated treasures of nearly half a century's laborious study. Since the late change in his circumstances, he has exclusively practised as a phy-

sician, and with considerable success notwithstanding the silly prejudices which exist in this country on the incompatibility of literary pursuits with professional avocations. A few years back he was appointed Professor of Natural History to the Medical Department of the University—a situation which could not be committed to abler hands. From one who possesses every requisite for the study of this beautiful science;—such as a knowledge of most languages—the advantages of foreign travel—and above all, an enthusiastic admiration of the works of nature, a display of no mean type might be expected. To the improvement to be derived from those lectures, the pleasure of attending them gratuitously is superadded; for during their delivery in the Natural Philosophy Hall of the college,

"No surly porter stands in awkward state,
"To spurn th' imploring *student* from the gate,"

the worthy professor generously permitting all who wish to attend his discourses. Of course we have taken advantage of this immunity; and as often as an advertisement from the Academic Portal informed us of Dr. STOKES's twelve lectures, on some subjects of Natural History, we hastened to enjoy the treat. It is here perhaps the best idea of his manner and powers may be formed; for in discussions of this nature he is quite "at-home." His world in miniature being arranged previous to his entry, he walks forward modestly but manfully with nature's own credentials stamped upon his brow, and centered in his looks, addresses his audience—"Gentlemen, the object of this lecture is profit, the subject &c. &c." giving its name whatever it may be. You would perceive at once, even before he opened his lips, that he is not of the common mould. The forehead, awful to a degree from its magnitude, is finely formed, and intellectual in the extreme; the eye rolling in its liquid element of benevolence, tells you in language not to be misunderstood, that here is a tear for misfortune, while the native energy of its fire still beaming from under the time-drooping lids, would seem, like a beacon in the storm, to invite the houseless to a home; and then the halo of philapthropy that encircles his whole countenance, concentrating in its conciliating softness all you could expect from the ablest artist in realizing upon the canvass "another kiss of peace." Never was the triumph of the soul in its tracings and impressions upon the temple of its abode, more manifest than in the physiognomy of Dr. STOKES. His is a true copy of the "*os sublime*"—in him the happy definition of the bard is fully realised. His delivery, or rather his reading, for he writes upon all his subjects, presents little to warrant any particular description. His voice is weak, so that it cannot be heard at a great distance, and is occasionally interrupted, as if the organs of speech were not under the influence of volition, or as if the flow of ideas was too rapid for distinct enunciation. Besides the excellence of the matter in his discourses, the composition is invariably correct—sometimes beautiful and sublime, as the subject admits. From the meanest reptile up to the last link which reasoning man forms in the chair of creation, every object is sketched with a masterly hand. The secrets of the earth are explored by a descent into some fathomless mine—mountains are ascended, their height calculated, and their production accounted for upon the volcanic principle with a hypothetical accuracy quite surprising. But if in this comprehensive view of the Universe, any thing bearing upon the state of his country or the malignity of man should present itself, it is then every fibre of his heart vibrates to the theme, and the noble feelings rush in a torrent of indignant digression. In a moment the "green hills" of his country that now lie blasted beneath the service of oppression, are clothed with bleating flocks, and re-echo the "piping" of happy shepherds—the valleys that are doomed by the present order of things to produce a tenth of their fruit, to be confiscated in the name of GOD, pour fourth the superabundance of their fertility into granaries for the relief of the poor—the mines of Wicklow only wait the hand of industry to bring back another "Age of Gold"—and even the bleak heights of Cunnamora were already beginning to feel the genial warmth of blazing coal-fires, eviscerated from those mountains by the application of steam. ROBERT OWEN himself, in his bright-

est dreams of regeneration, might *envy* the protractor of so blissful a scene." The

"*Flumina jam lactis, jam flumina nectaris ibant,*"

"*Flava que de viridi stillabant ilice mella*"

of the silver-tongued Ovid falls short of his promised land of milk and honey. For awhile he smiles upon this Elysian offspring of his fancy—but doubts soon begin to rise—he casts a scowling glance upon the incorrigible mar-plot man—the vision melts from his agonizing gaze—and hope itself becomes ultimately the parent of despair. Nor does the culprit pass with impunity—his abuse of power, perversion of intellect, and dangerous ambition, are all chastized in a manner no way flattering to his vanity as lord of the universe. The frugality of the ant teaches him temperance; the social habits of the beaver instruct him in domestic tranquillity; and the pure virtues of the Indian, in his native wilds, are called to bear witness against the perfidiousness of civilization. Digressions of this nature often bring the Lecturer to a favourite subject—Political Economy, a science in which he is profoundly skilled. His knowledge in this respect is profound, for we believe he could without any great exertion of memory, state the relative bearings not only of British commerce and manufactures, but of those of every other country where they are cultivated. Of the correctness of his views we cannot pretend to speak, but sure we are that they are opposed to the legislative views which have reduced this country to a colony of paupers, and have the merit of being on the side of humanity. Having concluded his lecture, he lays aside the didactic formality of their Profession; the elevation of the Naturalist subsides into the dignified familiarity of the companion—seated upon the end of his table, he is surrounded by his pupils, and inculcates by a practical illustration those amenities of life of which he is so warm an advocate, and so perfect an example. Oh it is a pleasing prospect thus to behold the virtues of old age amalgamating with the feelings of youth, and rendering them divine even for a moment, by the contagion of a sympatheic communion. But there are things which will not melt into description even in the most skilful hands, and our admiration warns us to beware. We trust our silence therefore will be more eloquent than words, since neither our limits nor capacity will allow us to enter at greater length into the merits of this talented individual, who presents in his person, the rare combination of the Patriot—the scholar—and an Irishman.

ERINENSIS.

*** Since the preceding essay was prepared for the press, we have read a letter in the LANCET, corroborating our statements, and complimenting us on our talents. We thank the writer, and hope a continuance of his favours. He blames us for not stating our name—does he set the example himself? He laments our strictures on the college—does he give a single argument to shew their injustice? He condemns the introduction of politics—is it not obvious that it is to our politics, and not to their introduction he is opposed? He objects to religious inuendos—can he exculpate the college from the impropriety of keeping in their service a menial who practically ridicules the religion of the majority of their pupils? He *puritanises* over our personalities—why is he so inconsistent as to follow a precedent which he abhors? In one sentence he defines our statements satire—why betray his ignorance by contradicting his own definition almost in the same breath? Pshaw! is that your vindication "VINDEX?" We would rather have to contend with a hundred Goliahs than to be under the painful necessity of treading upon one miserable PIGMY.—

ERINENSIS.

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